## CLAIMS

1. A helically-toothed-belt transmission device for transmitting driving force by meshing between a helically-toothed belt and a helically-toothed pulley, the device being characterized in that:

when denoting a tooth pitch as "Pt", a tooth helix angle as " $\theta$ ", and a belt width of said helically-toothed belt as "W", said tooth helix angle " $\theta$ " is set in a range of

 $-0.2 \le 1 - W \cdot \tan \theta / Pt \le 0.75$ , and;

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a backlash between said helically-toothed belt and said helically-toothed pulley is set to be from 1.6% to 3% of said tooth pitch "Pt".

2. A helically-toothed-belt transmission device for transmitting driving force by meshing between a helically-toothed belt and a helically-toothed pulley, the device being characterized in that:

when denoting a tooth pitch as "Pt", a tooth helix angle as " $\theta$ ", and a belt width of said helically-toothed belt as "W", said tooth helix angle " $\theta$ " is set in a range of

1 - W·tan  $\theta$  / Pt  $\leq 0$ , and;

compressibility of said helically-toothed belt is set to be from 1.5% to 5%.